

LOW COMPRESSION SCREW

ABSTRACT OF THE DISCLOSURE

A screw comprising a screw shaft having a thread spirally positioned about the screw shaft so as to form a plurality of flights, said screw having a feeding zone, a compression zone and a metering zone, and means in said screw for providing a mass of material in a flight in the feeding zone that is substantially the same as the mass of material in a flight in the metering zone, wherein said means includes flights formed in the metering zone having a pitch and depth based upon the volume of the material in a molten state and flights formed in the feeding zone having a pitch and depth based upon the volume of the material in a bulk state. This design results in a screw which has a balanced mass flow, and thus a constant pressure gain along the screw without pressure peaks.

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